



**JOINT UTILITIES**  
OF NEW YORK

**Joint Utilities' Presentation:  
Energy Storage Deployment Program**

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March 29, 2019

9:00am – 1:00pm



**nationalgrid**

**Orange & Rockland  
Rockland Electric Company**

**conEdison**



# Meeting Agenda

## **Joint Utilities' Implementation Plans**

**9:00am – 11:00am**

1. Overview, Steps, and Timeline of Solicitations
2. Bidder Qualification Criteria
3. Bid Requirements
4. Bid Evaluation Criteria
5. Winning Bidder Responsibilities
6. Storage Operations Expectations
7. Contract Terms and Revenue Sharing

## **NYSERDA Implementation Plan – Bulk Incentives**

**11:00am – 12:00pm**

1. Bid Evaluation Criteria
2. Storage Operations Expectations

## **Questions from Stakeholders**

**12:00pm – 1:00pm**

1. Questions for Joint Utilities
2. Questions for NYSERDA

# Overview, Steps, and Timeline of Solicitations

## Implementation Plan

	Action	Con Edison	O&R	National Grid, Central Hudson, NYSEG, RG&E
1	Conduct stakeholder / pre-release bidder conference	March 29		
2	Release draft RFP and Terms and Conditions for comments by developers	May 31		July 30
3	Comments due on draft RFP and Terms and Conditions	June 14		August 15
4	Issue final RFP and Contract documents	July 15		September 30
5	Interested bidders submit prerequisite qualifications	August 1		October 31
6	Utility responds to qualifications and notifies bidders on status	August 15		November 26
7	Approved bidders submit proposals	November 1		December 20
8	Bid review complete	December 16	January 15, 2020	February 17, 2020
9	Winning bidders notified and announced	December 31	January 31, 2020	March 2, 2020
10	Contracts executed	Q1 and Q2 2020	Q2 2020	March – Sept 2020

## Questions / Concerns / Feedback

- Are any significant milestones missing?
- Are there any concerns with dates included in the Plans?
  - Is there enough time at every stage?
  - What do you view as the critical path?
- Are there any concerns with dates specified in the Storage Order?
  - E.g.: The end-of-year 2022 in-service date

# Bidder Qualification Criteria

## Implementation Plan

**To qualify for consideration, bidders must:**

**Demonstrate capability as an organization**

- Experience in deploying the proposed commercialized storage technology
- Provide 2-3 years of audited financials
- Provide a letter of credit or a guarantee from an investment-grade entity

**Demonstrate Capability to Execute the Project**

- Identify and demonstrate existing site ownership, site control or path to such, via a LOI

**Meet the Requirements Specified in a given IOU RFP**

- Propose a project with at least four hours duration, unless otherwise specified in the utility RFP and that meet operational requirements
- Accept the payment schedule in the manner specified in the RFP

## Questions / Concerns / Feedback

- Are there any concerns with the bidder qualification criteria that have been described in the Joint Utilities' implementation plans?
- Are there additional features that should have been included?

# Bid Requirements

## Implementation Plan

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**All bids shall be for a new storage project of at least 4-hour duration unless otherwise specified by utility RFP, without an interconnection agreement and include:**

- Total cost of the project
- Total payment required
- All funding sources (external to the utility contract)
- Detailed descriptions of project, including monitoring and control capability
- Proposed term of the Contract corresponding to its bid price, not to exceed seven years.
- Proposed revenue-sharing mechanism
- Provide credit review information detailed in RFP
- Letter of credit or guarantee equal to the contract liability from an investment-grade entity

- Proposed site and specific interconnection location (preferred locations will be specified in utility RFP)
- Demonstrated site control
- Preliminary site layout accounting for local zoning rules for the proposed project
- Metering and telemetry must meet NYISO requirements at minimum, add'l requirements TBD

## Questions / Concerns / Feedback

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- What components of total project cost should be required?
- Are there any questions or concerns with the credit review?
- What is missing in the bid requirements as described in the Implementation Plans?
- Intended commercial structure of counter party?

# Bid Evaluation Criteria

## Qualitative Factors

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### Include, but are not limited to:

- Overall project viability
- Characteristics of the proposed storage technology
- Feasibility of construction and timeliness of implementation
- Construction and operational record of the bidder
- Credit quality of the security underwriter
- Bidder is willing to execute the proposed Contract without modification.
- Bidder's overall plan to conduct public outreach
- Experience deploying storage in New York State and specific service territory
- Experience in the NYISO market
- Ability to meet data security provisions
- Safety, including fire suppression systems (as appropriate for technology)

## Quantitative Factors

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### Include but are not limited to:

- Total project cost and size (i.e., MW and duration) proposed
- Bid price
- All operational characteristics of the unit
- Location relative to high value areas
- Expected environmental benefits.
- Technical requirements
- Level of availability and reliability

## Questions / Concerns / Feedback

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- Questions/concerns with bid evaluation criteria?

# Winning Bidder Responsibilities

## Implementation Plan

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### Winning Bidders will:

- Enter into contract granting utility scheduling & dispatch rights
- Design, engineer, construct, commission the energy storage system, including required communication and control to utility by Dec. 31, 2022
- Demonstrate site control and other authorizations/permits required to fulfill contract
- Retain ownership; operate and maintain for the duration of the contract to maintain specific performance requirement
- Maintain the asset in accordance with the market participation requirements

- Register the POI with NYISO, with the utility as Bidding Agent (as required per use case)
- Comply with all NYISO and FERC rules and regulations
- Meet applicable utility's data security provisions

## Questions / Concerns / Feedback

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- Are there any concerns with the winning bidder responsibilities criteria that have been described in the Joint Utilities' implementation plans?
- Are there additional features that should have been included?

# Storage Operations Expectations - Bulk

## Use Cases

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### CECONY, O&R, NYSEG, RG&E focus

- Expected wholesale market participation:
  - Capacity
  - Must-offer day-ahead energy
  - 10 minute spinning reserves
- CECONY will prefer resources located in transmission load areas (TLAs)
- O&R will prefer locations that can also address solar penetration distribution issues
- NYSEG and RG&E will provide preferences if applicable (study in progress)
- Utility has full scheduling & dispatch rights for the term of the contract; Owner after

## Questions / Concerns / Feedback

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- What other markets should be considered?
  - Real-time energy?
  - Frequency Regulation?
- Valuation of market revenues and risk during contract period? After contract?
- Dual participation issues and concerns?
- Issues and concerns regarding Buyer Side Mitigation?



# Storage Operations Expectations - Bulk

## Operational Requirements

### **CECONY, O&R, NYSEG, RG&E focus**

- Daily cycling requirement at minimum
- Energy guarantee through the term of the contract
- Availability requirement >95%
- Round trip efficiency >85%

## Questions / Concerns / Feedback

- Feedback on cost vs performance balance of the technical requirements
- Operational requirements for expected wholesale market participation?
- Preferred management of warranty requirements?
- Flexibility to obtain warranty with fewer restrictions?
- Operational requirements for other uses? For preferred distribution uses?

# Storage Operations Expectations - Distribution

## Use Cases

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### **NATIONAL GRID & CENTRAL HUDSON focus**

- T&D deferral and/or reliability use cases
- Value stacked wholesale market revenue/cost avoidance where possible
- Utility has full dispatch rights for contract term
- Preferred locations, if any, and associated details will be specified in the draft RFP

## Questions / Concerns / Feedback

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- Preference and capabilities of 3<sup>rd</sup> parties to operate ESS day-day vs utility?
- Any concerns on obtaining land?
- Preference for larger single ESS or smaller distributed ESS to meet distribution use-case?
- Any concerns with distribution interconnections?

# Storage Operations Expectations - Distribution

## Operational Requirements

### **NATIONAL GRID & CENTRAL HUDSON focus**

- Provide high availability and reliability with warranty to support
- Participation in wholesale market (to the extent possible) while meeting distribution needs
- Detailed operational expectations will be specified in the draft RFPs
- Integration with utility control schemes and software

## Questions / Concerns / Feedback

- Feedback on cost vs performance balance of the technical requirements
- Operational requirements for distribution use cases?
- Operational impact on ESS lifetime and augmentation needs

# Contract Terms

## Contract Terms

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- Acceptance of Utility standard terms and conditions
- Standardized market revenue sharing for all bidders
  - Less charging or others costs incurred by the Utility
- Seven year contract preferred

### **CECONY and O&R**

- Contract price structure lump sum upfront payment (inclusive of NYSERDA Market Acceleration Incentive); plus annual revenue share
- Utility and Counterparty share 80/20 earned revenues over life of contract term

### **Central Hudson, National Grid, NYSEG and RG&E**

- Likely annual payments over the contract term, as specified by RFP
  - Potentially based on actual market revenues
  - May include upfront lump sum payment

## Questions / Concerns / Feedback

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- Value in contract terms less than seven years?
- Feedback on accepting Utility standard form of contract and impacts on proposed timelines?
- Fix the shared value of market revenue for all bidders to expedite bid evaluations?

### **CECONY and O&R**

- Feedback on revenue sharing of 20% Counterparty and 80% Utility over the life of the contract

### **Central Hudson, National Grid, NYSEG and RG&E**

- Treatment of sharing in market revenues, if applicable?

# Revenue Sharing

## Revenue Sharing

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### CECONY and O&R

- Standardized revenue sharing for all bidders
- Utility and Counterparty share 80/20 earned revenues over life of contract term
- Earned wholesale market revenues less charging or others costs incurred by the Utility

### Central Hudson, National Grid, NYSEG and RG&E

- TBD; dependent on payment structure
- Will be specified in the draft RFP

## Questions / Concerns / Feedback

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### CECONY and O&R

- Feedback on revenue sharing of 20% Counterparty and 80% Utility over the life of the contract
- Fixed value for all bidders to expedite bid evaluations?

# Appendix

## Contents

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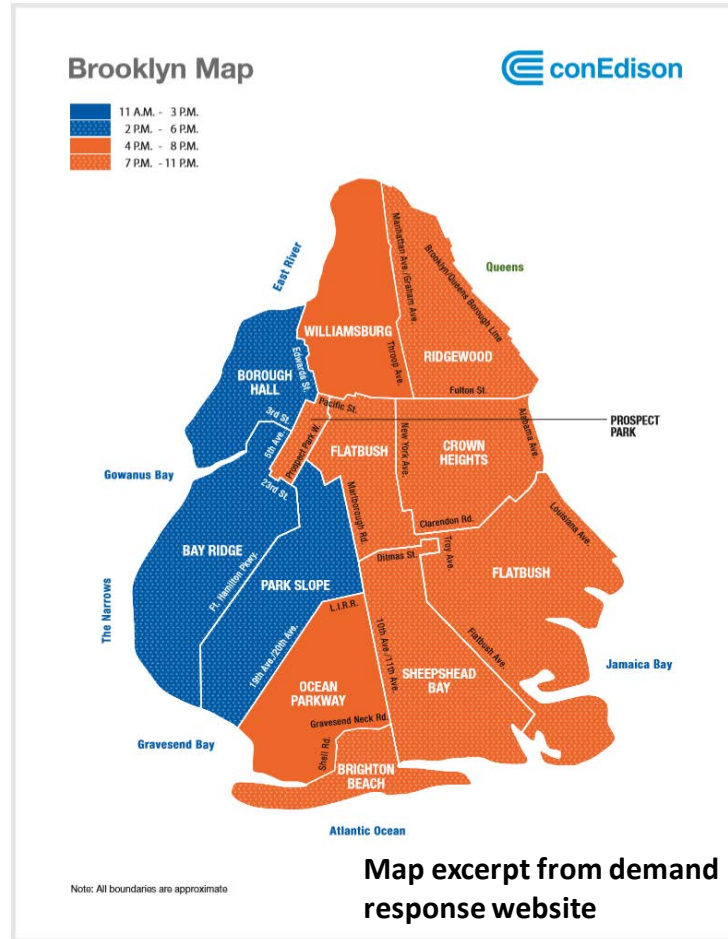
- CECONY Preferred Load Areas
- O&R Preferred Load Areas
- Other Utility Preferred Load Areas

# CECONY Preferred Load Areas

## Greenwood TLA (Brooklyn portion)

### Networks / load areas include:

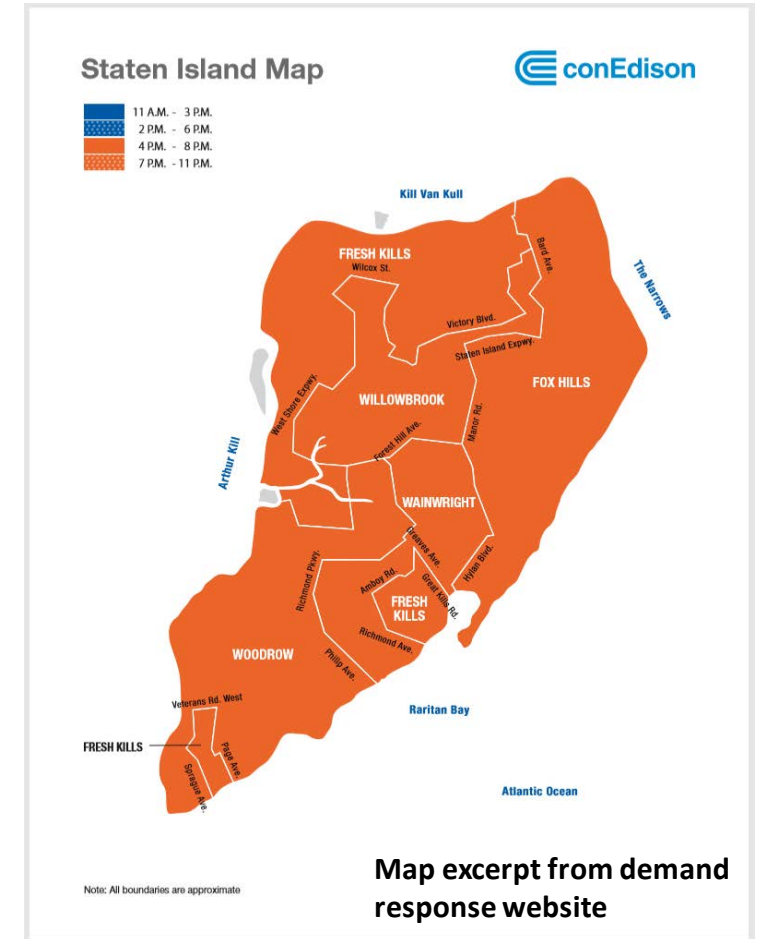
- Bay Ridge
- Brighton Beach
- Flatbush
- Ocean Parkway
- Park Slope
- Sheepshead Bay



## Greenwood TLA (Staten Island portion)

### Networks / load areas include:

- Fox Hills
- Willowbrook



**Disclaimer:** Maps above illustrate approximate geographic boundaries only. Areas and boundaries are preliminary and subject to change. Final locations will be provided in the draft RFP. Exact electric connections to the load area require verification.

The color coding and hours timeframes are not relevant to bulk storage procurement. Printable and zoomable versions of these maps can be found <https://www.coned.com/-/media/files/coned/documents/save-energy-money/rebates-incentives-tax-credits/smart-usage-rewards/networks-and-tiers.pdf>  
Distribution hosting capacity maps can be found at <https://www.coned.com/en/business-partners/hosting-capacity>

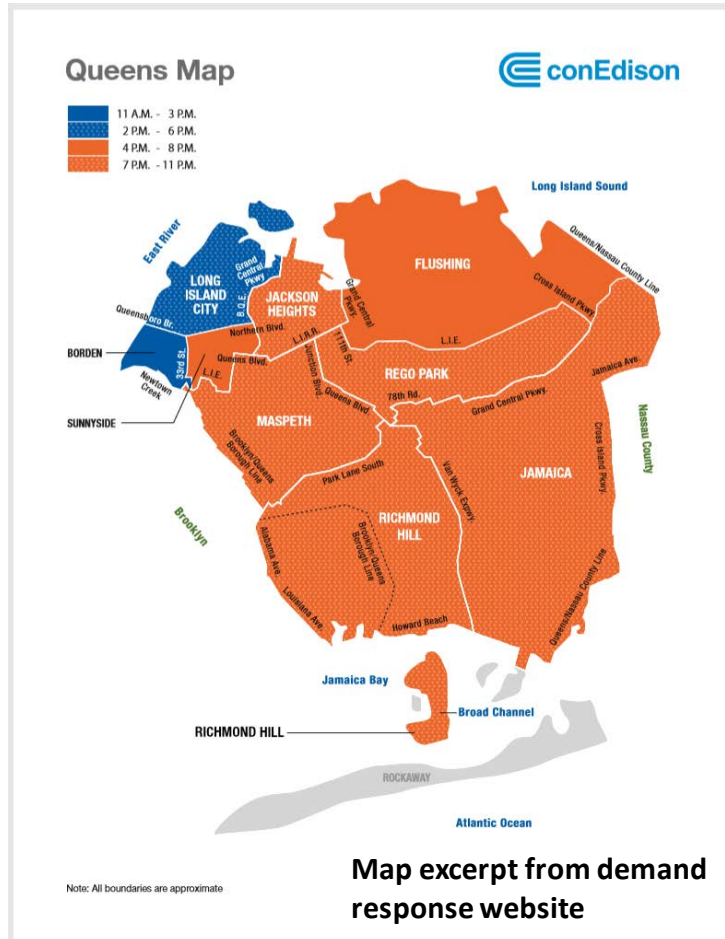
# CECONY Preferred Load Areas

## Astoria TLA

### Networks / load areas include:

- Long Island City
- Rikers Island
- LGA
- Flushing
- Jackson Heights
- Rego Park
- Jamaica\*

\*limited MW need, 60 MW max



## East 75<sup>th</sup> Street Area Station

### Networks / load areas include:

- Lenox Hill\*

\*limited MW need, 20 MW max



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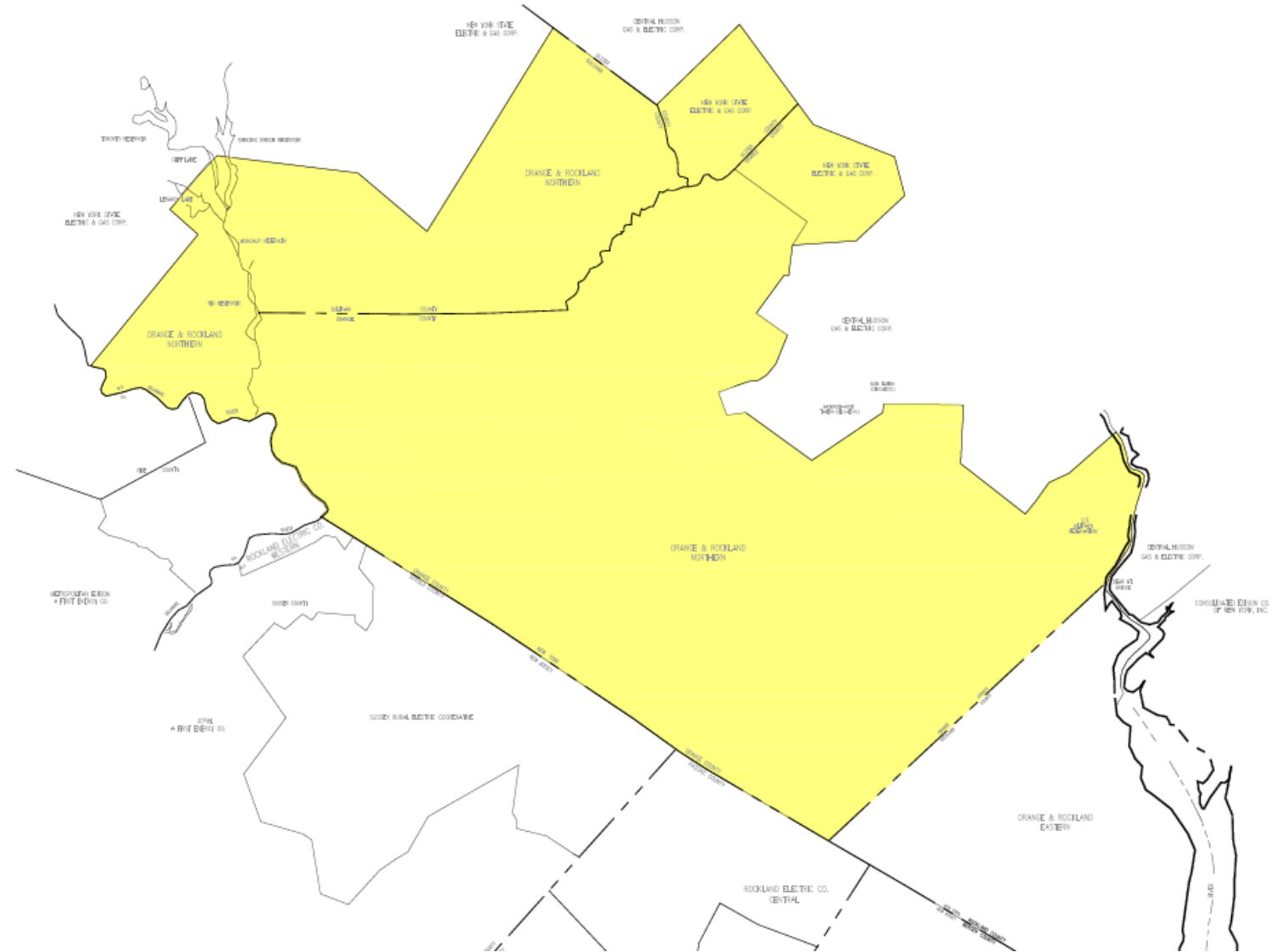


# O&R Preferred Load Areas

## Northern Division

Distribution hosting capacity maps can be found at:

<https://www.oru.com/en/business-partners/hosting-capacity>



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# Other Utility Preferred Load Areas

## **Central Hudson, National Grid, NYSEG and RG&E**

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- Preferred locations, if any, will be provided in draft RFPs